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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,412	09/29/2000	Russell Anderson	5240	9663

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EXAMINER

BEACH, THOMAS A

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,412

Applicant(s)

ANDERSON ET AL.

Examiner

Thomas A Beach

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/15/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gopinathan et al 5,819,226 in view of Sheppard 6,026,397. Gopinathan '226 shows a computer process to determine the risk of a transaction receiving data from the a transaction between a customer and merchant; determine which cluster associates (SIC code & Factor Group) with the merchant's name in the transaction and applying that cluster in conjunction with data derived from the transaction to a predictive model to determine the level of risk and estimating the likelihood of a fraudulent transaction (col. 1, lines 27-42; claims 2, 7 and 9), but fails to show a plurality of merchant clusters are determined by statistical occurrences of the merchant names in transactions. However, Sheppard '397 shows converting data/high categorical data like words, names, etc (col. 1, lines 39-54) such as merchant names into clusters (36) that included lookup tables where each name/data entry is unique (claim 4) and derived from raw merchant names/raw data (element 34 and col. 2, lines 1-10; claim 5) is vital to the predictive model (38) and creating a factor (affinity) from the clustering to be used in the model (claims 6 and 15-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify, as taught by Sheppard, to include merchant name clustering and segmenting of the merchant names into data to supplement a predictive model in order to gain great clarity over the SIC factors since it does not capture segmentation details (transaction statistics) that would improve the

Art Unit: 3671

ability to detect fraud in the model of Gopinathan and thus the risk involved with particular merchants in a particular segmentation as better defined than the SIC codes (Sheppard; col. 20, line 44). Gopinathan further shows whether to approve or decline a transaction based on the level of risk (col. 25-26, lines 60-68; claim 3) and risk factors for each cluster/segment (SIC Factor; claim 8). Gopinathan further shows transaction statistics such as volume and amount (col. 7, lines 29-34 and col. 8, lines 1-34; claims 10-13).

Response to Arguments

2. Applicant's arguments filed 07/15/04 have been fully considered but they are not persuasive. Applicant's arguments regarding Gopinathan and Sheppard are noted; however, Sheppard teaches the motivation (Sheppard; col. 20, line 44) to include the merchant names in clustering and segmenting to create data to supplement a predictive model in order to gain greater clarity over the SIC factors that Gopinathan discloses. Those SIC factors do not capture segmentation details (transaction statistics) that would improve the ability to detect fraud in the model of Gopinathan and thus improving the risk involved with particular merchants in a particular segmentation as better defined than the SIC codes. Furthermore, categorizing the data into a lowest and highest from would be within ordinary skill of data mining given that know problem of deciphering data in sensitivity levels, lowest to highest.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A Beach whose telephone number is 703.305.4848. The examiner can normally be reached on Monday-Thursday, 8:00am-6:30pm.

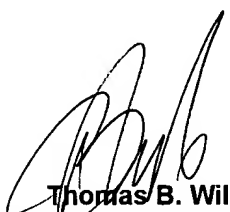
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Will can be reached on 703.308.3870. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9306 or 703.872.9306 for regular communications and 703.872.9306 for After Final communications.

Art Unit: 3671

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.306.4198.

Thomas A. Beach

October 31, 2004



Thomas B. Will
Supervisory Patent Examiner
Group 3600
